

Abstract

Joint element for a pneumatic structural element (1) according to the prior art, comprising a sleeve (2), a compression member (3), two tension members (4) and two spherical caps (5). In each case one joint element is fitted for the spherical caps (5) such that an opening (10) accommodates the spherical cap (5). The joint elements serve for introducing tensile and compressive forces, in a manner free of bending moments, into the pneumatic structural element (1), the compressive forces being absorbed by the compression member (3) and the tensile forces being absorbed by the tension members (4). The joint element has holes (12) for fastening the compression member (3) with a screw (15), on the one hand, and holes (11) for accommodating the tension members (4), on the other hand. The symmetrical arrangement of the holes (11, 12) ensures that the vectors of bearing forces and of the tensile and compressive forces in the joint element added together give zero and, furthermore, the bending moments occur symmetrically in relation to the compression members (3). Configuring the joint element as a plate (9) ensures that torques are neither introduced from the outside nor diverted to the outside.

(Figure 2)

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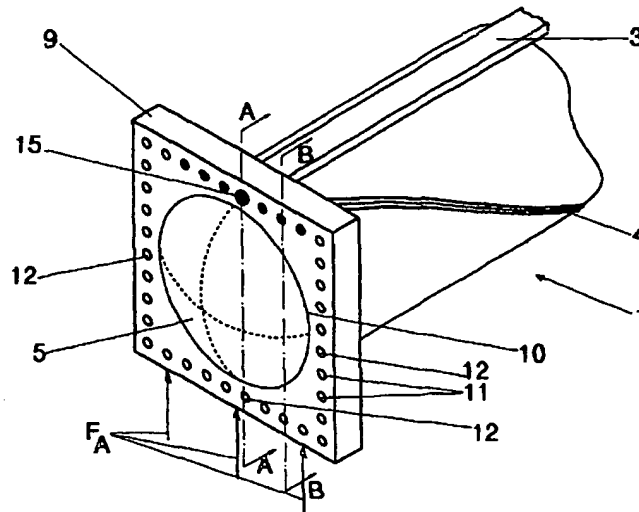
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(57) Abstract: The invention relates to a node element for a pneumatic component (1) consisting of a casing (2), a compression member (3) and two tractive elements (4), in addition to two swivel joints (5). Each node element is applied to the swivel joints (5) in such a way that an opening (10) accommodates the swivel joint (5). The node elements permit the introduction of tractive and compression forces into the pneumatic component (1) without a moment of flexion, the compression forces being absorbed by the compression member (3) and the tractive forces being absorbed by the tractive cables (4). The node element has holes (12) for fixing the compression member (3) with a screw (15) and holes (11) for receiving the tractive cables (4). The symmetrical arrangement of the holes (11, 12) guarantees that the load forces, in addition to the tractive and compression forces in the node element have a vectorial sum of zero and also that the moments of flexion occur symmetrically in relation to the compression members (3).

[Fortsetzung auf der nächsten Seite]